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EXAMINER

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ART UNIT PAPER NUMBER

1773

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 05142004

Application Number: 09/505,713
Filing Date: February 17, 2000
Appellant(s): JUD ET AL.

Virgil Marsh
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/4/04.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellants' statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 38-53 stand or fall together because appellants' brief does not include a statement that this grouping of claims does not stand or fall together **and reasons in support thereof**. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

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(9) Prior Art of Record

5,589,275	BREITLER et al	12-1996
5,968,663	MUGGLI	10-1999

Ullmann's Encyclopedia of Industrial Chemistry, 1998, VCH, vol. A11, pages 85-86, 93, 105, and 108-109.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 38-43 stand rejected under 35 U.S.C. 102(b) as being anticipated by Breitler et al for the reasons recited in a prior office action and restated below.

Breitler et al teach a composite material containing a metal layer on both sides of which is a plastic layer wherein the metal layer is a metal foil, preferably aluminum or aluminum alloy with an aluminum purity of most preferably 99.5% or higher, including AA8014, AA8079 or AA8101, having a thickness of 40-70 μ m; wherein the plastic layer(s) is a polyamide-based thermoplastic containing polyamide with a thickness of 20-50 μ m (Abstract; Col. 3, lines 1-22 and lines 66-67.) Breitler et al teach that the plastic layers on both sides of the metal layer include composites of two or more films or layers wherein the polyamide-based thermoplastic layers may additionally and independent of each other be provided with an outer lying sealable layer and/or barrier layer of thermoplastics, such as a polypropylene sealable layer, wherein the sealable layers are sealable films deposited via adhesives, applied by lamination or lamination coating wherein the thickness of the sealable films may be 6-100 μ m thick and furthermore, one or more layers, e.g. 1 to 10 μ m thick, of a sealing layer coating may be deposited on the plastic composite (Col. 4, lines 1-38.) Breitler et al further teach that a single or double-sided sealable

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composite may be obtained by single or double-sided coextrusion of the plastic layers, wherein in that connection, it is useful for the plastic layers to contain or comprise a polyamide-based thermoplastic and at least one polyamide layer to feature a sealing layer on at least one side, i.e. each layer of polyamide thermoplastic may be covered with a sealable layer on one side or both sides, independent of the other layers (Col. 4, lines 36-45.) Breiter et al teach that to join the aluminum foil or to bond the plastic films or individual layers to each other, an adhesive coating and/or bonding primer are usually employed wherein a suitable adhesive is a maleic-anhydride modified polypropylene, and suitable bonding agents are epoxy or urethanes, wherein the bonding agent or primer may be for example applied in amounts of $0.1-10\text{g/m}^2$, usefully $0.8-6\text{g/m}^2$ or the adhesive layer has a thickness of $1-12\mu\text{m}$ or applied in an amount of $0.1-14\text{g/m}^2$ (Col. 5, lines 3-47.) Breitler et al teach a number of layer arrangements including the layer structure as instantly claimed wherein the plastic films may be formed by warm coating or coextrusion and may be subjected to stretch-drawing, to produce a composite film useful in manufacturing packaging and parts of packaging such as packaging containers, base parts, blister packs, for storing or packaging foodstuffs or pharmaceutical products (Col. 5, line 48-Col. 6, line 23; Col. 6, line 65-Col. 7, line 33.)

B. Claims 38-53 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Breitler et al in view of *Ullmann's Encyclopedia of Industrial Chemistry*, vol. A11 for the reasons recited in a prior office action and restated below.

The teachings of Breitler et al are discussed above. Breitler et al teach a composite film containing a metal foil, particularly aluminum, with plastic films on both sides thereof wherein the plastic films may be multilayer films formed from various layer structures **and specifically**

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teach the general layer structure as instantly claimed with layer thickness within or comprising the instantly claimed ranges utilizing optional adhesive, bonding and/or primer layers to bond plastic layers to each other and/or to the metal foil as instantly claimed wherein the plastic films may be extruded, coextruded, or laminated via adhesive. Though Breitler et al disclose all of the layers, layer materials and layer thickness as instantly claimed, Breitler et al does not specifically limit the invention to the specific composite film combination as instantly claimed, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any of the structures disclosed by Breitler et al selecting from the disclosed materials taught by Breitler et al based on the desired film properties for a particular end use, **and further to utilize routine experimentation to determine the optimum thickness** of the individual layers given that layer thickness is a result-effective variable affecting the barrier, mechanical, adhesion and sealing properties of the resulting composite based on the desired end use of the packaging composite taught by Breitler et al. Further, it would have been obvious to one having ordinary skill in the art to determine the appropriate laminating method, such as extrusion laminating, lamination coating, coextrusion or laminating via adhesives as taught by Breitler et al, to produce the multilayer plastic films based on the individual layer materials to be laminated wherein laminating via adhesives, extrusion coating and coextrusion are conventional methods of producing composite plastic films as evidenced by Ullman's which specifically teach that coextrusion is unique in that it can produce very thin multilayer films and that polyamide films are mainly employed in composite structures produced by lamination, extrusion coating, or coextrusion with sealing or barrier resins (6.7 Polyamide, page 105.) Ullman's also teach that composite films are conventionally utilized in the packaging industry to

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produce various packaging structures such as bags, sacks, and blister or cushion packs, or thermoformed structures such as containers from thicker films, wherein the combination of plastic films with aluminum foil produces semirigid composites with exceptionally low permeability to gases, water vapor and odors (6.13 Composite Films, 7. Summary of Uses, pages 108-109.)

(11) *Response to Argument*

The First Issue

The Appellants argue a) that the Examiner's interpretation of Breitler et al is allegedly in error and unsupportable, b) that the obviousness rejection included by the Examiner allegedly shows that none of appellants' claims are anticipated, and c) that the Examiner allegedly utilized a secondary reference, Muggli, as an incorrect attempt to insert into Breitler that which is allegedly not in Breitler et al.

a) The Appellants continue to argue that the Examiner's interpretation of Breitler et al is incorrect, that one skilled in the art would not have reasonably interpreted the specified sections in the same manner as the Examiner, and that nowhere does Breitler et al disclose a polypropylene layer between a metal layer and a polyamide layer, and that the recitation at Col. 4 of Breitler et al only teaches polypropylene layers on the outer sides of the composite and not the outer sides of the polyamide layer and hence between the polyamide layer and the metal layer. However, as previously stated in Paper No. 14 and Paper No. 16, the Examiner maintains her position with regards to Breitler et al and specifically points to lines 36 to 44 of Column 4 of Breitler which read:

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“A single or double-sided sealable composite is obtained by single or **double sided coextrusion of the plastic layers with e.g. a polypropylene/polyethylene copolymer.**

In that connection it is useful for the plastic layers to contain or comprise of a polyamide-based thermoplastic to feature a sealing layer on at least one side i.e. **each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers.**” (Emphasis added.)

Below the Examiner has included her previous statements presented in Paper No. 14:

“This recitation clearly states that **each layer** of polyamide may be provided on **one or both sides** with a sealable layer, or polypropylene per Col. 4, line 24, independent of the other layers, **not** that each layer of polyamide may be provided **only on one side** with a sealable layer such that the composite is provided with an outerlying sealable layer on one or both sides as interpreted by the Appellants. Hence, the Examiner maintains her position that the invention taught by Breitler et al does in fact teach the instantly claimed invention having the structure polyamide plastic layer/metal layer/polyamide plastic layer wherein **each polyamide plastic layer** may be provided on one or both sides of the polyamide layer with a sealable polypropylene/polyethylene layer independent of other layers by double-sided coextrusion, hence resulting in pp/pa/pp/metal foil/pp/pa/pp, and further notes that her interpretation is **consistent** with what is understood in the packaging art, noting Muggli as evidentiary support of her interpretation wherein Muggli also utilizes the same language as the commonly assigned Breitler et al and further exemplifies polyethylene/polypropylene “sealable layers” (c, c¹, e and e¹) on both sides of the plastic layers (d and d¹), which are present on both sides of a central metal layer (a) (Abstract; Col. 3, line 42-Col. 4, line 2; Col. 4, line 57-8.)

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Further, as stated in Paper No. 16:

“...a fair reading of Brietler et al by one having ordinary skill in the art would nevertheless lead one skilled in the art to the interpretation that a sealable or polypropylene layer can be provided on **either or both sides of each polyamide layer** independent of other layers.” Hence, Column 4, lines 36-44 states that each polyamide layer can be covered with a sealable layer on one or both sides, independent of the other layers, wherein one or both sides obviously refers to the polyamide layer not the composite as argued by the Appellants and therefore the Examiner maintains her position that the Brietler et al reference serves as a teaching with regards to the instant invention.

b) With regards to the Appellants' arguments that the obviousness rejection provided by the Examiner allegedly proves that the instant invention is not anticipated by Breitler et al, the Examiner notes that though Breitler et al do in fact disclose the layer structure as instantly claimed, Breitler et al do not specifically limit the invention as instantly claimed including a metal foil thickness of 5 to 100 microns. Breitler et al teach a metal foil thickness of 40-70 μm which falls within the instantly claimed range of 5-100 microns and hence anticipates that portion of the claimed range. However, for the portion of the claimed range not taught by Breitler et al, namely 5 to less than 40 and greater than 70 to 100 microns, the Examiner has rejected the claims as being unpatentable or obvious over Breitler et al given that layer thickness including metal foil thickness is a known result-effective variable specifically affecting the barrier properties of the resulting composite with barrier properties increasing with thickness wherein one having ordinary skill in the art would have been motivated to utilize routine

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experimentation to determine the optimum thickness to provide the desired barrier or film properties for a particular packaging end use.

c) With respect to Appellants' arguments that the Examiner allegedly utilized a secondary reference, Muggli, as an incorrect attempt to insert into Breitler that which is allegedly not in Breitler et al, the Examiner first notes that Breitler teaches polypropylene layers on either or both sides of the either or both polyamide layers and hence a secondary reference is not needed given that Breitler teaches all of the elements of the instant invention. Further, given that Breitler does include all of the elements of the instant invention in the single reference, the anticipation rejection is proper for the range portion of the composite film taught by Breitler. The Examiner only utilized Muggli as an evidentiary reference to rebut the Appellants' arguments that the Examiner's interpretation of Breitler was incorrect and inconsistent with the art. The Examiner further notes that though the Appellants have supplied a declaration from Breitler stating what the inventor's intent of Column 4 of the Breitler reference was, the declaration does not negate what is clearly written in Column 4 and properly interpreted by the Examiner.

The Second Issue

The Appellants argue a) that the Examiner's interpretation is incorrect and that Breitler et al do not teach polypropylene layers on both sides of the polyamide layer, b) that there is no reason to combine the references, and c) that the Examiner allegedly has not followed the requirements of the Graham decision.

a) As recited above, the Examiner believes her interpretation is correct and consistent with the art wherein Breitler et al clearly teach that the polyamide plastic layers can be subjected

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to single or double-sided coextrusion with polypropylene (Col. 4, lines 36-38, wherein double-sided coextrusion would result in polypropylene layers on both sides of the polyamide layer) and that "each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers" not one or both sides of the composite film as argued by the Appellants.

b) In response to Appellants' arguments that there is no motivation to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the primary reference clearly teaches double-sided coextrusion of the polyamide layer(s) with propylene but does not further teach extrusion-lamination or extrusion coating as alternatively claimed by the Appellants. Hence, in the interest of compact prosecution, the Examiner has relied upon Ullman's to show that lamination, extrusion coating, and coextrusion are functionally equivalent methods utilized in the art to produce composite films comprising polyamide and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any of these conventional methods to produce the composite film taught by Breitler. Therefore, the Examiner's construction of the obviousness rejection is proper given that Breitler teaches coextrusion and Ullman's suggests that lamination, extrusion coating and coextrusion are comparable methods for producing composite films. The Examiner further notes that contrary to Appellants' statements, the Muggli reference is not

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utilized by the Examiner as a secondary reference to provide that which is allegedly missing from the Breitler reference but utilized as an evidentiary reference to rebut Appellants' arguments that the Examiner's interpretation is not consistent with the art and incorrect.

c) In response to Appellants' arguments that the Examiner has allegedly not applied the elements of Graham, the Examiner notes that the rejection clearly determines the scope and content of the prior art namely Breitler et al, clearly ascertains the differences between the prior art and the claims in issue, resolves the level of ordinary skill in the pertinent art and evaluates the evidence of secondary considerations namely Ullman, to provide a clear teaching of the instantly claimed invention and hence the obviousness rejection is proper given that Breitler does teach polypropylene layers on both sides of either or both polyamide layer in the composite.

Summary of Response to Arguments

In summary, the Examiner maintains that Breitler taken as a whole clearly teaches polypropylene sealable layers on both sides of the polyamide plastic layers resulting in a composite comprising the following layer structure:

polypropylene/polyamide/polypropylene/metal/polypropylene/polyamide/polypropylene

Col. 4, lines 36-45, of Breitler recites:

"A single or double-sided sealable composite is obtained by single or double-sided coextrusion of the plastic layers with e.g. polypropylene/polyethylene copolymer.

In that connection it is useful for the plastic layers to contain or comprise of a polyamide-based thermoplastic and at least one a polyamide-based thermoplastic to feature a sealing layer

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on at least one side i.e. each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers.”

This section of the reference does not state that the polypropylene or sealable layer is on one or both sides of the composite but that it is on one or both sides of the polyamide layers. If one considers the Appellants’ interpretation that the polypropylene is only on one side of the polyamide layer, namely the outer lying surface of the polyamide layer, why would the reference state that the plastic layers are subjected to double-sided coextrusion wherein double-sided coextrusion would provide a polypropylene layer on both sides of the polyamide layer? Further, why would the reference state that at least one polyamide layer be provided on at least one side with a sealing layer, further indicating that the polyamide layer can be provided on both sides with a polypropylene layer? Lastly, if the Appellants’ interpretation that the polypropylene sealable layer is only provided on the outer lying surfaces of the polyamide layers, wouldn’t the statement “each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers” have read “may be covered with a sealable layer on the outer lying side, independent of the other layers” not “on one or both sides”? Therefore, the Examiner maintains that contrary the Appellants’ arguments, Breitler when taken as a whole does in fact teach polypropylene layers between the polyamide plastic layers and the metal foil as in the instant invention.

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For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,



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May 14, 2004

Conferees


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